First Kids 1st Data Resource Book

Helping Native Youth Thrive Through Research and Data

APPENDIX – Annotated Bibliography

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This annotated bibliography includes all research articles in the past five years that the First Kids 1st team found on factors that may help Native youth thrive. A summary of the literature review is included in the First Kids 1st Data Resource Book. The research articles found in the literature review are included below in alphabetical order by author. How each article relates to the First Kids 1st Data Indicators Framework is indicated at the end of each citation.


This study aimed to test the Cuqyun model which is a culturally grounded theory for prevention of suicide and alcohol abuse. The Cuqyun model is an outcome of an analysis of Alaska Native (AN) life histories in the People Awakening project. Youth completed an online survey in small groups and their responses went to a secure server. There were three phases of measurement: initial proposed measurement model; elaboration, pilot testing, and cultural review; and refinement of measures. The culturally grounded theoretical model for prevention of alcohol abuse and suicide risk was used. Sources of data included online surveys of small groups and direct contact through face-to-face interaction between the researchers, parents, and youth. Study approval was granted by the University IRB, Yukon Kuskokwim Health Corporation Human Studies Committee, school superintendents, and the local Alaska Native school board. A total of 413 AN youth, 223 females, and 190 males, between the ages of 12 and 18 (M=15.31) were involved in testing a model of Reasons for Life and Reflective Processes about alcohol abuse and its potential consequences. Individual characteristics such as mastery-self, family and friends did not serve as an observable variable, but rather family characteristics (conflict, cohesion), community characteristics (support, opportunities), peer influences (discourage, disapproval), reflective processes (family, self, way of life), and reasons for life (beliefs, efficacy, family responsibility) served as observable variables. There was a bidirectional association between family characteristics and community characteristics as well as with individual characteristics and family characteristics. This study was focused on which characteristics (individual, family, or community) would predict scores on the latent variables of Reasons for Life. Information such as suicidal behavior and alcohol consumption was collected through
surveys. Since those are sensitive topics, there is a possibility of inaccurate reporting. The peer influences measure was not specifically developed for AN youth, so it a broader scale.

**Data Indicators:** Successful Students, Supportive Environments


The purpose was to assess the connections between chemical and non-chemical stressors from American Indian and Alaska Native (AI/AN) natural and built environments. The article reviewed published literature that illustrated chemical and non-chemical environmental stressors. Inclusion criteria consisted of articles that included AI/AN children as participants in the study and those that illustrated results of chemical and non-chemical stressors. The databases used were PubMed, Web of Science, and ProQuest’s Environmental Science Collection and the keywords were focused around AI/AN, children, and pregnancy. A PRISMA diagram demonstrate their study selection process. This study used published literature between 1986 and 2016. The literature consisted of cross-sectional, qualitative, case-control, and community level articles. IRB approval not reported. The sample population was mainly rooted in New York and Alaska while the rest were from the western United States. The sample sizes ranged from 18 to 360. The 35 articles were organized into themes for the built environment and the natural environment. The themes for the built environment were: farm operations; mold; household use of wood for heating or cooking; and household lack of plumbing/running water. The themes for the natural environment were: residential proximity to polluted landscapes; cognitive function; AI youth; toxicant levels; thyroid function; mothers including pregnant women and those who breastfeed; developmental outcomes; outdoor/indoor air pollution; and dietary consumption. Overall, it was concluded that the use of wood for heating and cooking could lead to an increase in respiratory illnesses due to the measured volatile organic compounds (VOC) levels being greater than 100 ug/m³ (per cubic meter of air). The non-chemical stressors, such as the use of farm equipment, led to a greater risk of children being injured. Inadequate plumbing led to adolescents having diarrhea due to the contaminated pipes. There were few identified relevant studies due to the variety of stressors, outcomes, and study designs. Since most of the participants were from New York, there was a lack of diversity. Also, this article only focused on published literature, so they were unable to gain knowledge from unpublished literature.

**Data Indicators:** Healthy Lifestyles

The purpose is to address the Healthy People (HP) 2020 objectives for children and their parents with low-income, ethnically diverse, and immigrant sample by using data to figure out who meets the objectives. Video-recorded tasks, ecological momentary assessment, interviews, and surveys were used. Phase I consists of a cross-sectional study and phase II consists of a longitudinal epidemiological cohort study. Data is from the first phase of the Family Matters study, mixed-methods data of the home environment. The University of Minnesota’s IRB Human Subjects Committee approved all protocols. Participants were households with children between the ages of 5-7, had a sibling between 2 - 12 years, lived in the same house with a guardian more than 50 percent of the time, and shared at least one meal a day with the parent/guardian. Included racial/ethnic backgrounds were: African American; Hispanic/Latino; Hmong; Native American; Somali; and White. Children belonging to low-income and immigrant households were below the goal for vegetable consumption. More sodium was consumed by Native Americans, illustrated by a group consuming more than 2,300 mg. The Native American children met the sleep requirements because they got more between 9-12 hours of sleep. However, only 56 percent of the Native American parents met the sleep requirement. Households with Native American children did not meet the target “of only 6 percent of households being food insecure.” All racial groups did not meet the HP 2020 objectives for physical activity because they did not participate in 300 minutes/week of moderate physical activity. The prevalence of children being overweight or obese could not be calculated because the children were pre-stratified on weight status. The sample population consisted of 25 families, so it does not represent other subgroups. There could also be an increased Type 1 error because multiple Healthy People 2020 outcomes were examined.

**Data Indicators:** Healthy Lifestyles, Supportive Environments


The purpose was to expand research on the connection between depressed mood, parental stress, and parent food-related parenting practices by using the ecological momentary assessment. Data was collected from the *Family Matters* study, funded by the National Institutes of Health. Methods such as surveys, interviews, and video-recorded tasks were used to identify risk factors for childhood obesity. An in-home observation was conducted which consisted of two in-home visits and a direct observational period lasting eight days. An online survey and interview were completed by parents. Children reported three times what they ate during a 24-hour period. The University of Minnesota Institutional Review Board Human Subjects Committee
approved the protocols. Children between the ages of 5 and 7 who had a sibling between the ages of 2 and 12 had to share at least one meal together and live in the same household at least 50 percent of the time. The children were from Minneapolis and St. Paul, Minnesota. The children were African American; Hispanic; Hmong; American Indian; Somali; and white. American Indians had the lowest stress levels and the second lowest scores for depressed mood. High parental stress resulted in less homemade meals and a heightened pressure to eat. Six different ethnic groups are included in the participants so the study does not explicitly refer to American Indians.

**Data Indicators:** Supportive Environments


This paper examined the connection between pediatric oral health outcomes and parental health literacy among families of the Navajo Nation. The study includes constructs from the Social Cognitive Theory, Locus of Control, and Health Belief Model. This study was composed of randomized trials. Information was obtained by the Basic Research Factors Questionnaire which was completed by the parents and portrayed information about oral health knowledge, dental services, indicators of oral health, and attitudes. There were 14 questions about oral health knowledge and recommended oral health behavior and twelve questions about parental oral health behavior. This study was approved by the Navajo Nation Human Research Board, the Colorado Multiple Institutional Review Board, the Tribal departments of Head Start and Education and Head Start parent councils, and governing bodies at the Tribal and local levels. Participants included 1,016 parent-child dyads with children between the ages of 3 and 5, enrolled in a participating Center. On average, parents were 32 years old and many of them were women. Most of the children and participants (98 percent) self-identified as AI/AN. The study included about half of the enrollment for the Navajo Head Start Program. The parents answered 74 percent of the questions about oral health correctly, but adhered to only 55 percent of the recommended oral health behaviors. On average, parents did not believe that their child’s oral health was in the hands of the dentist. Parents who had higher health literacy took responsibility for their children's oral health instead of believing it was the dentist’s responsibility. Sixty-eight percent of parents believed their children's oral health good, but only fifty-nine percent of parents believed they had good oral health. Participants who did not speak English were excluded. The analyses of this study were based on cross-sectional data, so casual relationships cannot be demonstrated. The findings in this study could also underestimate the strengths of the relationships that were investigated because general health literacy measures are not as strongly correlated with oral health constructs compared to health literacy measures that specific to oral health.

**Data Indicators:** Supportive Environments

The purpose of this study was to determine the health-related fitness of AI youth because previous research has mainly focused on the body composition of AI youth. The FITNESSGRAM physical fitness test was used to assess the fitness level of students. This test measured aerobic fitness, muscular endurance, and body composition. The results were compared to the criterion-referenced health standards created by the Cooper Institute Scientific Advisory Board. Data was collected from the Fitnessgram assessments that the PE teachers used. The tests were administered outside, but the body composition assessments were done inside for privacy. ANOVAs and t-tests were used to explore the differences in weight and sex. Approval for this study was granted by the university institutional review board, the Educational Division of Tribal Council, and the principal/administrators at the schools. The included participants were youth from grades 5 – 9 who lived in a Southwestern U.S. rural AI community. All the participants were from the same school campus that did not have a gymnasium available to grades 5 to 6. Grades 7-9 had an aerobics room, weight room, and a gymnasium. There was a total of 85 participants out of the 150 students total in grades 5-9. Sixty-three percent of participants were in the healthy fitness zone (HFZ) for aerobic fitness, 74 percent for muscular endurance, and 60 percent for flexibility. For muscular strength, boys scored much higher, but boys and girls had similar scores for muscular endurance, body composition, and aerobic fitness. The sample size was small, and therefore it does not represent all the AI youth and their fitness levels. Also, there were large standard deviations that made it hard to compare results to different studies.

**Data Indicators:** Healthy Lifestyles, Successful Students


This study tested the feasibility of home-visiting and family-based diabetes prevention for American Indian youth with or at risk for type 2 diabetes because type 2 diabetes affects minority communities and AI/AN have the highest rates. To form a cross-site steering committee and community advisory boards, a 9-month community needs assessment and formative development phase was implemented. There were 29 interviews and 21 discussions with AI youth. The youth included in the study needed to be able to identify a support person and if they could not, they were excluded. Data was collected from home-based education, group wellness events in the community, and support person home-based education. The Together on Diabetes program was based on the principles of ecological and transtheoretical models of behavior change. Study approval was granted by the Navajo Nation Human Research Review Board, the White Mountain Apache Tribal Board and Tribal Council, the Phoenix Area Indian Health
Service Institutional Review Board, the Johns Hopkins Bloomberg School of Public Health IRB, and the local Indian Health Service and school boards. Eligible participants for this study were AI youth between the ages of 10 and 19 who resided within a 50-mile radius of the medical facility and were referred by a hospital provider because they had prediabetes or were at risk for type 2 diabetes. There were a total of 408 AI youth included as participants and 255 of them were AI youth and the rest were support persons. Most of the AI youth (82.8 percent) went to a certain clinic for health care where they continued to see the same provider. Psychological factors were examined and 17.1 percent of the participants were positive for depression based on the Patient Health Questionnaire Modified for Teens. When the behavioral outcomes were examined, 68 percent of participants did not engage in at least 30 minutes of rigorous physical activity. Also, there was a low fruit and vegetable intake among participants, but most of the calories consumed were from sweets. All the participants included were at risk for type 2 diabetes or had it, so there was not a control group for comparison.

**Data Indicators:** Healthy Lifestyles, Vibrant Communities


The purpose of this study was to examine how Alaska’s Community Health Aides/Practitioners (CHA/Ps) support healthy families. Grounded theory was used for this qualitative study. Data were collected through 30-90 minute interviews. Approval was granted by the Alaska Area Institutional Review Board and the Bristol Bay Area Health Corporation Ethics Committee. Six CHA/Ps completed interviews about their work, background, and relationship to medical professions. Participants were majority female (83 percent), averaged 33 years old, and worked as a CHA/P for an average of 12 years. CHA/Ps were often the only on-the-ground healthcare providers in rural Alaska, so they worked under the doctor’s license and sought advice from dental health aides, nurses, and doctors. It was determined by their responses that CHA/Ps were motivated to help the community and make a difference. However, CHA/Ps found it psychologically exhausting to always be on-call, especially when calls were from a loved one. Before health aide programs were implemented, people were sent to Dillingham, which was 30 minutes away from the village to receive care. With the Community Health Aide Program, AN people can now receive treatment in the village. Sample is predominantly female.

**Data Indicators:** Vibrant Communities

The authors discuss and correlate three main topics with early childhood caries (ECC): breastfeeding attitudes; social support for mothers and birthing; and supporting healthy infant feeding through community programs. The study uses data from the Baby Teeth Talk Study (BTT). Using a participatory approach grounded in indigenous research methodologies, a partnership was formed between the Norway House Cree Nation Health Division and the investigators as a part of the BTT study. The data was collected through focus groups and interviews that were set up between the CRA and the communities. The study was approved by the University of Winnipeg Human Ethics Review Board. Participants included grandmothers and great grandmothers in the First Nation who participated across 20 interviews and 4 focus groups. The data showed that “improper feeding techniques and a lack of oral care resulted in tooth decay.” Breastfeeding was common not only in a home but in public as well, but now it has become a controversial subject of matter. Some of the “respondents discussed the role of support for new mothers from family members as being an essential aspect of healthy infant feeding and subsequently good oral health.” Breastfeeding is an action that is highly promoted because it has been linked to several positive health outlooks. There is a “direct causal relationship between infant feeding practices and the rate of ECC in First Nations populations specifically.” Limitations were difficult to assess.

**Data Indicators:** Supportive Environments


The purpose of the article is to show a direct correlation between a child's oral mouth health and overall body health and Early Childhood Caries (ECC). The study looks “at the early introduction of country food, the use of traditional medicine for infants for teething and oral health, and the mitigation of teething issues through swaddling and temperature regulation.” Many of the subjects were contacted through personal connection with one of the indigenous individuals being a community research assistant (CRA). Grandmothers in the community were recruited to participate in a total of 20 interviews and four focus groups. The source of data includes interviews and focus groups. Approval of this study was granted by University of Winnipeg Human Ethics Review Board. The study was conducted between winter of 2012 and spring of 2013. The participants included women ages 40-80 and a majority of them were grandmothers and great grandmothers. An early introduction of table food was linked to being an important part of the infant’s diet because it helps with “health and prevention of illness,
and an appreciation for this type of food as adults.” Secondly, there are many biomedical and local methods that helped with the process of teething but the applied method is based upon the nurturer decision. Lastly, they used “swaddling, which served to keep the infant dry and helped to regulate the temperature of the infant.” This study does not have concrete data to support its claims, and it cannot be generalized.

**Data Indicators**: Healthy Lifestyles


The authors report on the effects of a peer mentor program for promoting well-being (mental health and cultural identity) among First Nations, Métis, and Inuit (FNMI) elementary and middle-school students. An exploratory mixed-methods, longitudinal evaluation design was used. The participants went through three waves of peer mentorship, and after each wave, results from the questionnaires would be discussed and analyzed. A blend of descriptive, sub-coding and simultaneous coding followed by open-coding for interview analysis. Sources of data include semi-structured interviews and questionnaires which assessed mentoring, mental health (MHC-SF), cultural identity (CCS-Identity), school climate (California Healthy Kids Survey), life satisfaction (Life satisfaction scale) and demographics. Approval was obtained by the Centre for Addiction and Mental Health Research Ethics Board, school board research office, FNMI school board advisory committee, and the Education Board of the local First Nations communities. Parent consent and child assent was obtained. Participants included 105 FNMI adolescents who completed the three annual surveys and 28 youth that were interviewed. Female participants in the two-year mentoring group had greater cultural identity and had significantly better mental health compared to those receiving one-year or no years of mentoring. Qualitative themes included: (1) intrapersonal; (2) interpersonal; and (3a) learning-culture; and (3b) learning-healthy relationship skills. Theme 1 found students experienced growth through self-confidence and comfort in group settings. Theme 2 found students reported opportunities to meet new people, strengthen relationships, and build relationships with mentors. Theme 3a found that the mentor program allowed students to connect with their culture and other students sharing their culture in and outside of school. Theme 3b found that students were able to apply learned skills to their everyday life. This was an exploratory study, the sample was small, some youth had no or limited access to the program, MHC-SF have not been evaluated in FNMI populations, the interviews may have encouraged positive feedback rather than talking about both the negative and positive, and the mentor group was younger and more likely to have two parents.

**Data Indicators**: Healthy Lifestyles, Supportive Environments

The purpose of the article is to assess the experiences and impact of the inclusion of adult mentor in a Big Brothers Big Sisters (BBBS) program on Aboriginal youth’s behavioral, psychological, and social functioning. A pre-/post-intervention assessment including the Strengths and Difficulties Questionnaire (SDQ) and Revised Social Anxiety Scale for Children were used. Youth-mentor experiences were assessed through: stability and longevity; mentor-youth similarities; relationship quality (closeness, warmth, trust, respect, and happiness); frequency of weekly contact; and number of different activities. Mentoring status and youth outcomes were assessed using structural equation modeling. Data included pre- and post-intervention questionnaires completed by parents assessing their child’s mental health and behaviors and interviews with children assessing their mental health, behavior, academic performance, and social functioning (conduct problems, attention-deficit hyperactivity, emotional problems, peer-related difficulties, pro-social behavior, and social anxiety). Study procedures were approved by the Centre for Addiction and Mental Health research ethics board in Toronto, Ontario. Consent and assent to participate were received from the parent and child, respectively. Participants included 125 Aboriginal and 734 non-Aboriginal youth, 6–17 of age, who participated in a Big Brothers Big Sisters community mentoring relationships national survey. Most participants were female (62 percent). Aboriginal youth were significantly less likely to have a long-term mentorship than non-Aboriginal youth and more likely to have a mentorship end in dissolution. However, Aboriginal youth reported higher quality mentor relationships, more weekly contact, and more varied activities. Decreased symptoms of social anxiety and distress in new situations and with unfamiliar peers and fewer behavioral problems was reported among mentored Aboriginal youth. The sample contained mainly metropolitan BBBS families, self-report, adult mentor perspectives were not equal, and the study did not collect preference on adult mentor status.

**Data Indicators:** Healthy Lifestyles, Supportive Environments


The purpose of the study is to address gaps in the literature on the knowledge, attitudes, and behaviors in American Indian populations about infant feeding practices. A knowledge, attitudes, and beliefs (KAB) questionnaire regarding breastfeeding was administered as part of the Prevention of Toddler Overweight and Teeth Health Study (PTOTS) which used a clustered randomized controlled trial. The data was sourced through KAB questionnaire assessing breast feeding and formula feeding, introduction of solid foods, and physical activity. The study protocol was approved by the tribes and the Northwest Portland Area Indian Health Board Institutional Review Board. The
participants included 438 mothers from five Northwest American Indian tribes that participated in PTOTS. Mothers had an average age of 25.3 years. Mothers had knowledge of the nutritional value of breastmilk but did not have knowledge of other health benefits that is provided (e.g. reduced risk of diabetes). They reported that they and their social networks believed that exclusive breastfeeding for 6 months is healthy. Only 50 percent of mothers knew the correct time to introduce solid foods but most reported believing that introducing solid foods at 6 months was healthy. Most mothers recognized that daily movement was important for their babies and reported believing television was unhealthy for play time. The subjects answered an overall 63 percent of questions correctly, where the most knowledge was demonstrated regarding breastfeeding. Mothers reported asking feeding advice most commonly from mothers, sisters, and mothers-in-law. Some limitations to the study include: questions that had too many possible answers, two questions were thrown away, and formal psychometric testing was not concluded.

**Data Indicators:** Healthy Lifestyles, Supportive Environments


The purpose of the study is to determine whether an intervention peer mentoring program will help increase the knowledge of healthy living, decrease Type 2 diabetes mellitus, decrease BMI scores, and decrease waist circumference. Authors report using a quasi-experimental trial with a parallel nonequivalent control arm, where the experimental group received a high school mentor and the control group received the standard intervention. The data was sourced through a control arm and an intervention arm. They used BMI z scores and waist circumference measurements for data analysis. Study protocol was approved by the research ethics board at the University of Manitoba and protocol is in accordance with the Declaration of Helsinki. The participants included 151 children in Garden Hill First Nation during the 2010–2011 and 2011–2012 school years. They separated the study between 4th grade students who were given the intervention program versus 5th grade students who were not given the intervention. Mentors were from a neighboring school in 7-12th grades. The intervention group experienced a significant reduction in waist circumference as compared to the control group, even when analyzing data from overweight and obese children separately. The knowledge of healthy foods and living a healthy lifestyle significantly increased in the control arm. Knowledge of healthy foods increased significantly in the intervention arm compared with the control arm. Children in the intervention arm experienced a greater improvement in body satisfaction. Possible selection bias due to using only partial blinding of researchers. Third, there is a potential risk for carry over effects.

**Data Indicators:** Healthy Lifestyles, Supportive Environments

The authors report on data collected from the New Mexico Youth Risk and Resiliency Survey (NM-YRRS). The purpose is to determine a correlation between suicide attempts and the presence of a positive adult influencer within three aspects of life: at home; the community; and the school. The sources of data include a survey sent out to the New Mexico public schools. The University of New Mexico Human Research Protections Office and the Southwest Tribal Institutional Review Board provided approval for this study. The study included 2,792 American Indian/Alaska Native New Mexico public school students in grades 9 to 12 who answered questions about past year suicide attempts. The analyses resulted in multiple findings; strong positive relationships with an adult figure in the home, community, and school were associated with "reduced rates of suicide attempts among AI/AN youth in New Mexico." AI/AN girls had a higher prevalence of suicide attempts (16.7 percent; 95 percent CI, 14.3 – 18.1) than AI/AN boys (10.8 percent; 95 percent CI, 9.1 – 12.4). The prevalence of suicide decreased with an increase in hypothesized protective factor variables. Study was self-reported, cross-sectional, and missing data. The study does not take into account private school, dropouts, or homeschooled children.

Data Indicators: Supportive Environments, Vibrant Communities


The purpose was too summarize the outcome of three studies to illustrate the continuum and support the Native American Youth and Family Center (NAYA) program provides to urban AI/AN emerging adults who are transitioning out of foster care. Major outcomes are transition needs and experiences of urban AI/AN youth, and desired culturally based services to address transition needs. The authors report three methods: observation; focus group interviews; and ethnographic individual interviews. Studies were reviewed and approved by the university IRB committee. Participants were receiving services at NAYA, self-identified as Native American, and were 17–23 years old. Participants expressed the need for mentorship, someone to offer guidance and role modeling, as well as cultural and spiritual knowledge and guidance. Needs included transportation assistance, job interviewing skills, support both emotional and instrumental, and a consistent and safe environment to talk about difficult issues. Results are limited to urban youth transitioning out of foster care and receive services from one organization.
Data Indicators: Supportive Environments


Between 2003 and 2010, the authors sought to investigate weight perceptions of First Nations (FN) youth aged 10–14 years who reside in northern and southern Ontario communities. Results will help inform culturally appropriate initiatives tailored to meet youth needs. This was a community-university partnership and a convenience sample. Student participants were asked to respond to specific statements about (a) perceptions of their current weight compared to peers, (b) concerns about their current weight and (c) current dietary initiatives with the goal of losing or gaining weight. Other data included the collection of basic demographic and anthropometric information from students including age, grade, height and weight. Office of Research Ethics at the University of Waterloo, Ontario, Canada (#15402), in partnership with the Chiefs and Councils and local Education Authorities. The authors received approval from the local education authorities and/or principals of the participating schools, and passive parental consent. Participants were in grades 6–8 in five northern Ontario communities. The respondent population saw themselves as average even though 60.3 percent of boys and 55.4 percent of girls were either overweight or obese. While current standards classified youth in overweight or obese, the students saw their body size as “just right” because they look like those around them. Girls expressed more concern about their weight than boys. Previous studies suggest that being skinny is not socially acceptable. Unexpectedly, a high number of average weight boys reported trying to lose weight which suggests they feel pressure to be thin. Respondents, both male and female, reported eating less to try to reduce weight. The environment may make it difficult for youth to have control over food as nutritious dense foods may not be available in their communities. Classifications are not specific to the population.

Data Indicators: Healthy Lifestyles


The broad goal of the bigger project was to gain knowledge about food security and build community capacity to address this issue. This article reports on an exploration of food perceptions and experiences from childrens’ perspectives. Photovoice methods and individual interviews (pre-post photos): training high school student co-researchers to conduct Photovoice interviews with elementary students and recruiting elementary students to take pictures of food (data). Individual interviews took place with 33 children. Each child participant took 20 photos each of food they liked and disliked and food at home and in the community. Group debrief discussions with high school co-
researchers. A total of 445 food-related photographs resulted. The research received approval from the University of Alberta Health Research Ethics Board. Parental consent and student assent for participation was obtained. This study had two populations of participants: high school student co-researchers; and child participants ages 8-10 years. There were 33 First Nation child participants who began the project and 26 completers. Using grounded theory’s constant-comparative method, two themes emerged “(1) dualistic understanding of healthy versus unhealthy foods; and (2) "little packages of food." Participants understanding of healthy food included the perception of health aspects such as fruit, vegetables, grain, etc. However, this perception caused them to identify a food as healthy when it was not, such as fruit flavored cereal. The second theme were often unhealthy quick snacks high in sugar, salt, and oils. From the interviews, participants were positive about eating healthy food and open to eating more but were limited by finances of the family and availability in the community. Researchers expected to see data referring to traditional foods but saw very little. Finally, family context was important as the primary caregiver or sibling was reported as being the food preparer. Children were younger participants than other Photovoice projects. The community is approximately 12 miles from the nearest grocery store and resident’s household income is lower than the provincial average. Data were collected at one point in time.

**Data Indicators:** Healthy Lifestyles, Supportive Environments, Vibrant Communities


The purpose was to understand relationships between bullying involvement and mental health and to explore factors that might be amenable to prevention or intervention efforts to reduce bullying and improve mental health. Cross sectional survey of public schools in Minnesota during 2013. Survey data. All public-schools were invited to participate, data from 84 percent of state districts are included in this article. The study was exempt from review by the University of Minnesota’s Institutional Review Board. Data were collected from 8th, 9th, and 11th grade Al/AN students. Experiencing bullying was associated with internalizing behaviors (e.g., “feeling very anxious, nervous, tense, scared, panicked or like something bad was going to happen”). These behaviors were modified when protective behaviors were included in the statistical model, specifically higher internal assets and feeling empowered reduced the odds of internalizing symptoms. These protective factors were also inversely associated with suicide attempts (higher protective factors, lower attempts). Feeling safe at school was protective of both suicide and bullying. While teacher-student relationship has been identified as a protective factor previously, it was not associated with study outcomes. Female students reported higher levels of internalizing symptoms and suicidal ideation along with lower internal assets, empowerment, and feeling safe at school. Statistically, bullying involvement equally affected both sexes. Limitations include this being a cross sectional study.
Data Indicators: Healthy Lifestyles, Supportive Environments


The purpose was to understand whether assets such as internal strengths and/or environmental supports experienced during early and mid-adolescence predict risky sexual behaviors during early adulthood among American Indians. Secondary data analysis using the National Longitudinal Study of Adolescent Health, a school-based probability sample that is representative of schools in the United States in terms of region, urban/rural, school size, and type. Assets were measured from four context domains: personal; family; school/peer; and community. No study approval was presented in this article. Data from two waves were used in this study: In wave 1, youth were between 12-16 years of age; and predicted sexual behavior at Wave 3 youth were between 18-23 years of age. The final analytic sample was 456 participants from wave 1 who self-identified as American Indian. Personal asset of self-control was protective of early sexual debut and smaller number of sexual partners, as was school attachment and non-deviant friends. Family support was protective for lower number of sexual partners and higher condom use. Partner communication was protective for early sexual debut. Finally, caring adults in the community promoted higher condom use. Asset accumulation from all four domains was significantly associated to promote healthy sexual behaviors in adulthood. Finally, having two parents in the house (biologic or adopted) was protective of early sexual debut. Limitations include: Cross sectional data that does not include Reservation school. Exploratory study.

Data Indicators: Healthy Lifestyles, Successful Students, Supportive Environments


The purpose was to conduct a review of the literature to identify protective factors among AI/AN adolescents that are associated with positive health outcomes. In this review, protective factors are those behaviors or situations that protect or promote against undesirable outcomes. Systematic literature review in which the following databases were surveyed: Elsevier Science Direct; ERIC EBSCOhost; PubMed; and Web of Science databases. Exact search terms used for each database included “American Indian,” “Alaska Native,” “adolescent,” “protective factors,” “protective mechanisms,” and “supportive factors.” Inclusion criteria included original research articles published between 1970-2015 written in the English language. As a result, 16 quantitative and two qualitative studies were included in the review. Analysis was completed using inductive content analysis to identify themes identified in three or more publications. The authors organize their findings using the social ecologic model,
specifically protective factors at the individual, relationship, and community levels. Cultural connectedness was categorized as a multilevel protective factor. At the individual level, protective factors are current and future aspirations, personal wellness, positive self-image, and self-efficacy. At the relationship level, factors include non-familial and family connectedness. Community factors include positive opportunities and positive social norms. All protective factors were associated with outcomes of interest in respective articles included in this review. Across articles reviewed the age range was 9-19 years of age without an indication of which factors are most salient given a certain age.

Data Indicators: Healthy Lifestyles, Supportive Environments, Vibrant Communities


The purpose was to assess the relationship between sleep duration and overweight among children between the ages of 2-5 years. The authors hypothesized that the risk of obesity would be increased by shorter overnight and variable weekday to weekend sleep duration. This was a cross-sectional study based on the Healthy Children, Strong Families (HCSF2) baseline data. HCSF2 was a randomized controlled trial of an obesity prevention intervention. Baseline data collection was completed in March 2015. Cross sectional survey of parents including demographic questions, Child Sleep Habits Questionnaire, Family Nutrition and Physical Activity (FNPA) screening tool, and child’s height and weight were measured. Institutional review board (IRB) approvals were obtained from the University of Wisconsin, other collaborating academic institutions, and the participating tribal councils, and tribal IRBs. A non-probability sample of 398 adult and child dyads, with children between the ages of 2-5 years of age. Longer overnight sleep duration was significantly associated with lower BMI z-scores after controlling for covariates. Similarly, higher family income, more family education, lower adult BMI, and healthy family eating habits also remained significantly associated with lower child BMI z-scores. Weekday to weekend variability was on average a 9-minutes difference in overnight sleep duration and not associated with BMI z-score. Social desirability bias potential as parents are reporting on parenting behavior.

Data Indicators: Healthy Lifestyles, Supportive Environments


Through this manuscript, the authors examine the individual characteristics, family characteristics and school experiences of high school youth from rural African
American, White, Hispanic and Native American communities and how their experiences relate to their educational aspirations. A cross-sectional diagram was employed for this study. Data from the Rural High School Aspirations study, a national inquiry of rural high school students’ postsecondary education aspirations, were extracted for this study. School characteristics data were extracted from the National Center for Education Statistics Common Core of Data to determine the percent of students eligible for free lunch, and ethnic makeup of the students. School experience, student characteristic, and family characteristic data were self-reported and part of a college preparation program. Missing data was addressed by the use of STATA. This study was supported by the U.S. Department of Education’s Institute of Education Sciences. Participants included 6,150 rural students from 9th-12th grade who knew their educational aspirations. Of these students, 4.2 percent were Native American. Analysis indicated that on average all groups had comparable educational aspiration but Native American youth had significantly lower educational aspirations (M=16.58) than African American youth (M=17.25). All groups had comparable parental educational aspirations, however Hispanic/Latino and Native America youth’s parents had significantly less education and had endured more economic hardship than White and African American youth. With regards to valuing school, Native American youth had the lowest scores (M=4.20) compared to African American youth (M=4.76), Hispanic/Latino (M=4.47), and White (M=4.29). The use of a cross-sectional study does not examine causality or directionality. Most measures were self-report and may be affected by social desirability.

**Data Indicators:** Successful Students, Supportive Environments


The purpose was to identify barriers and facilitators reported by AI children to consuming recommended food groups from the 2005 Dietary Guidelines for Americans (DGA). The nominal group technique (NGT) was used. NGT is a mixed method of data generation and interpretation that combines aspects of qualitative and quantitative methodologies. Data collection occurred from March through December of 2010. Qualitative and quantitative responses were gathered from participants. The study was approved by tribal resolution and institutional review board. Verbal and written assent was obtained from all children. A total of 61 fifth grade children participated. Children were all enrolled members of a Northern Plains tribal community. The development of themes resulted in two recurring themes: (1) personal preference; and (2) External environmental barriers. Among the barriers to adhering to DGA were personal preference of food based on taste, looks, and smell. Additional barriers were cost of these foods, parent/caregiver purchase choices, and store is too far away. When asked how to make it easier for kids to get DGA suggestions included making it easier for youth to try things they are interested in (garden, put out a variety of vegetables to try environment and preference worked together, caregivers should buy products that kids prefer (noodles for whole grains, yogurt instead of milk, and lower prices) also these
items were not common in the home environment. The process required facilitation which could have lead responses.

**Data Indicators:** Healthy Lifestyles, Supportive Environments, Vibrant Communities


This research focuses on the social and affective needs of contemporary adolescents and provides researchers, educators, and counselors with information on topics they can include in the curriculum to satisfy the social and affective needs of high-ability adolescents. Content analysis to cluster responses and report the frequency of responses. Student responses to a six-question feedback form designed to inquire about the social-affective concerns. Study approvals were not mentioned in this publication. Participants included 280 high-ability adolescents in 5th to 12th grade, and of these 69 self-identified as AI/AN. Youth participants reported wanting the ability to communicate with a caring adult about feelings and emotions such as stress, worry, fear, and other emotions like anger, future aspirations such as college and careers, and relationships like peer relationships, boys/girls, and social relationships. Specific to AI/AN respondents was the desire to talk about personal and family issues as well as bullying concern. Exploratory study conducted over a month-long summer program. The study was based on responses to the question “something you wish you could discuss with a caring adult sometime.”

**Data Indicators:** Healthy Lifestyles, Supportive Environments


In this article, the authors report on the results of the Photovoice component of a larger study, Cooking with Kids (CWK). The purpose of CWK was a school-based food and nutrition education curriculum with the goals of increasing knowledge and skill for nutritional eating. Photovoice was used to obtain formative data on barriers and opportunities. The authors used Photovoice, a qualitative method, to collect data. Photographs were taken over a 2-week period. Individual semi-structured interviews with each participant were followed by a group discussion. During discussion students identified themes, food preferences and cooking experiences. Study approvals were not mentioned in this publication. Participants were American Indian youth, 11–14 years of age, with 11 males and 3 females who attended a NM middle school. A main finding was the lack of knowledge about healthy versus unhealthy foods. This was demonstrated by incorrectly identifying food as healthy. Participants often were not located near a supermarket and had to shop at the local convenience store. Many participants felt they were tempted to eat unhealthy because of the food preferred by
family members (“my grandma like donuts and my grandpa likes coke”), therefore these foods are available for youth to consume. Additionally, fast food venues are abundant in rural communities. Finally, participants believed healthy food would be available at home if they were more willing to eat it. Additional barriers to eating healthy, from the discussion groups, were lack of cooking knowledge, and the authors report that many students were excited about the potential to learn how to cook, a component of the CWK curriculum. Data were collected over a two-week period. More participants identified as male than female. Limited to youth perceptions without parent/caregiver input/confirmation.

**Data Indicators:** Healthy Lifestyles, Supportive Environments, Vibrant Communities


The authors explore “the relationships among the predictors of self-reported health behaviors” (p. 2) among AI/AN children. The authors report using social cognitive theory. Sources of data included a previously validated, 60-item questionnaire to assess self-rated health behaviors and physical activity (psycho-social predictors) through self-efficacy, beliefs, barriers, social support, intentions, and self-report behaviors. Approval for this study was granted by the University and School District Institutional Review Boards. Participants included 145 Native American children that averaged 13.5 years of age in grades 5th through 9th from two southwestern U.S. schools, and approximately 55 percent participants were female. Self-efficacy was found to predict beliefs about being physically active, barriers to participation, and adult and peer social support for being physically active, where “beliefs, barriers, and peer social support significantly predicted intention to be physically active.” The majority of participants self-reported their health (85 percent) and physical shape (74 percent) as “Ok” or “Not so good.” Self-report data may be subject to social desirability bias (conducted in the classroom). Study does not report actual behaviors, rather focus is on intentions. Cross-sectional study design cannot determine causality.

**Data Indicators:** Healthy Lifestyles, Supportive Environments


The authors explore the role, challenges, and strengths that rural Alaska Native grandparents play in providing care for their grandchildren. A qualitative, exploratory research design was employed. A CBPR “inspired” framework was used to refine the research approach and questions through a collaboration between tribal leadership and University of Alaska Fairbanks. Data were collected through semi-structured interviews...
with Yup’ik grandparents which focused on their role and experience. This study was approved by the Bristol Bay Area Health Corporation (BBAHC) Ethics Committee and Executive Board leadership. Subsequent approval from the local tribal council was received as well as approval from both Oklahoma State University and University of Alaska Fairbanks IRBs. Participants included 20 Yup’ik grandparents (14 women, 6 men) that averaged 70 years of age (46-95 age range) in southwest Alaska who were currently raising or previously raised a grandchild for at least one year. Qualitative analysis resulted in four themes of (a) “as our own”, (b) roles of grandparents raising their grandchildren, (c) education, and (d) employment. The first theme described the importance of protecting and raising grandchildren as if they were their own children and without distinction based on relational status (e.g. blood vs adopted). The second theme identified that grandparents raising grandchildren filled the roles of family provider by providing grandchildren with necessities, being a teacher of appropriate behaviors through treating others with respect, being a role model for others by “living their values through their own actions,” and as a wisdom bearer to orally pass on knowledge of traditional Yup’ik life including lessons learned. The third theme addressed how grandparents supported educational achievement but also recognized the time it took away from their relationship and traditional education (e.g. cooking Native foods). The final theme addressed how grandparents often sought out employment to cover expenses and provide for their grandchildren. The study was conducted in one community. The lead researcher was an insider from the community which may impact objective data collection. Additionally, interviews were conducted with the first 20 participants to volunteer.

Data Indicators: Successful Students, Supportive Environments


The authors explore Yellowknives Dene First Nation (YKDFN) youth perspectives of health, factors affecting health, and on their role in health research. The authors report using a decolonizing CBPR approach “through an Indigenous research lens” and represented a research collaboration between YKDFN Wellness Division, community research assistants, traditional knowledge and cultural resource workers, and University of the Fraser Valley. Data were collected in 2016 during a youth leadership camp and workshop using a mixed-methods approach including two quantitative surveys, PhotoVoice, mural art, nominal group technique, sharing circles, observations, field notes, and personal reflections. Study approvals were not mentioned in this publication. Participants included 15 YKDFN youth, ages 13-18 years. YKDFN youth contrasted health issues (littering, pollution, smoking, drugs and alcohol, arsenic contamination, and unsafe structures) with health priorities (pathways, gardens/greenhouses, youth involvement, sports, community gatherings, Elders and culture, and nature/land). They identified teaching and learning traditional knowledge on the land and activities that emphasized connections to the land as important health priorities. Youth were found to
be proud of the health of youth in their community, culture, participating in cultural activities, and eating traditional foods, where the majority of participants positively linked culture to their health. They identified that food, trees/land, water, culture (including language), school, family and friendship (relationships), and community were all connected and vital for community health. All youth indicated some level of interest in being involved in future research to connect further to the land, continue learning cultural practices, develop leadership skills, and promote healthy living. The academic researcher was an insider from the community which may impact objective data collection. Small sample limits generalizability beyond the study.

Data Indicators: Vibrant Communities


The authors review current maternal and infant health outcomes as a result of breastfeeding, identify racial/ethnic disparities among breast feeding rates, and discuss best practices for increasing breast feeding rates. This review examined studies including mothers from all racial/ethnic backgrounds. AI/AN mothers have lower rates of breast feeding initiation than almost all racial/ethnic groups. However, one study found that using traditional medicines promoted higher breast feeding rates. It was found that awareness of maternal and childhood outcomes related to breast feeding need to be increased. Consuming high levels of alcohol should be a consideration when determining whether breastfeeding is appropriate. Mothers who smoke, however, should be encouraged to breastfeed as the benefits of breastmilk still outweigh formula feeding. Six percent of hospitals directed by the Indian Health Services have achieved “Baby Friendly status” which has been shown to promote and increase breastfeeding practices. Peer counseling, clinic appointments, group prenatal education classes, and hospital/WIC policy changes (larger food packages and free breast pumps) are all effective strategies for increasing breastfeeding among minority mothers. Methods for data collection and extraction are missing which leaves questions as to the validity of the results presented. Additionally, best practices are not all specific to AI/AN populations but rather racial/ethnic minority mothers collectively.

Data Indicators: Healthy Lifestyles, Vibrant Communities


Authors report on the individual, familial, and extrafamilial factors which promote or discourage early sexual initiation among early-adolescent American Indian/Alaska
Native (AI/AN) youth. Brofenbrenner’s ecological model informed the study design to assess protective factors across multiple intervention levels. Data was collected from baseline surveys to assess program feasibility and effectiveness. Individual (biological, psychological, behavioral), familial (family structure and process), and extrafamilial (peer) protective factors from sexual initiation were assessed. Study protocol was approved by the Alaska Area, Portland Area Indian Health Services, and University of Texas Health Science Center Institutional Review Boards, and twenty-two tribal organizations across Alaska, Arizona, and the Pacific Northwest. Participants included a final sample of 537 AI/AN youth with an average age of 13.2 and majority female (55 percent) who completed both the baseline and follow-up surveys. Lower odds of sexual experience were associated with the individual level factors: next-year intention to have sex (psychosocial) and avoidance of risky situations and nonuse of alcohol (behavioral). A limitation of this research was the use of convenience sampling and self-report data measures.

Data Indicators: Healthy Lifestyles


The authors report on the implementation of the Nutrition and Physical Activity Self-Assessment for Child Care (NAP SACC) on the Pine Ridge reservation. The program aims to improve nutrition and physical activity of children and staff through practice and policy change. The NAP SACC program uses Social Cognitive Theory to promote self-efficacy and change. Program implementation included staff attending the NAP SACC workshop, workshop evaluation, action plan development and outcomes, and interest in additional workshops. Staff completed a workshop evaluation questionnaire evaluating content, delivery and program relevance. This study received exempt status from the institutional review board. Participants included 12 Head Start site cooks and the nutrition manager. Three priority topics were chosen for action plan development: water consumption; nutrition education; and feeding environment. It was found that water was not freely available indoors or outdoors, that nutrition materials and education were not implemented into classrooms or available for families, and that nutrition communication and modeling healthy behaviors were missing. Using purchased reusable water bottle to promote water consumption proved only partially successful as many bottles were misplaced. The Smart from the Start nutrition curriculum was adopted into classrooms in addition to monthly, family nutrition newsletters and education sessions. Finally, cooks have incorporated activities to introduce new foods to the children. Overall, follow-up evaluations indicated that only incorporating planned nutrition education into classroom routines increased significantly. Actual student behaviors and BMI were not assessed, rather sites provided program implementation feedback.

Data Indicators: Healthy Lifestyles

This study reports on the implementation feasibility and outcomes of a cultural intervention, People Awakening, designed to prevent alcohol use disorder and suicide among youth within rural, Alaska Native communities. The authors report using CBPR and cultural intervention theory which roots the intervention in indigenous culture to include mixed-methods research and culturally appropriate measurement development for an “indigenous model of protection.” Context was also assessed to evaluate differences in outcomes between two communities. Computer surveys were administered to assess cohesion, expressiveness and conflict within families, protective community characteristics, protective peer influences, reflecting on negative consequences of alcohol use and abuse, and beliefs/experiences that make life enjoyable. Study approvals were not mentioned in this publication. Participants included fifty-four Yup’ik youth that averaged 14.2 years of age participated in the Ellum Tugiinun (ET) study, including 31 females and 23 males. Meanwhile, 52 Yup’ik youth that averaged 14.6 years participated in the Yupiucimta Asvairtuumallerkaa (YA) study including 25 females and 27 males. ET and YA dose delivered were 26 and 15 modules, respectively, at community, family, and individual levels. The ET project had more funding and therefore resources to expand project delivery. Eighty-eight percent of content was delivered as planned, 86 percent of project content was delivered at an acceptable standard, and individual protective factors were delivered most often (66 percent), where Reflective Processes or “youth awareness about the broad potential negative consequences of alcohol use” and communal mastery were the protective factors most frequently delivered. Module attendance was 54 percent. Among the ET study, higher intervention dose was associated with higher levels of growth in individual, family, and community characteristic (intermediate variables) protective factors and the ultimate variable Reflective Processes. Among the YA study, higher intervention dose was associated with higher levels of growth in individual protective factors, but no significant associations were found with ultimate variables (Reflective Processes and Reasons for life). Small sample sizes, two communities in rural Alaska.

**Data Indicators:** Healthy Lifestyles, Supportive Environments


The authors report on the implementation of a three-part oral health intervention which focused on educating caregivers about oral health, increasing dental home referrals, and conducting caries risk assessments for American Indian children aged 6-months to 5 years. The Health Promotion Model (HPM) was used to identify barriers and solutions through a social ecological framework. Data points were collected from the customized
data collection sheet, dental referral tracking sheet, and Oral Health Risk Assessment Tool. Study protocol was approved by the Tribal Institutional Review Board (IRB) and Montana State University IRB. Participants included 38 eligible caregiver-children dyads from AI reservations in the plains of the northwestern United States with children ages one week to 67 months old (mean age 27.8 months). Thirty-four percent of caregivers reported not having a dentist. The majority of caregivers reported high risk factors for ECC including: experiencing tooth decay themselves in the past year (68 percent), children's frequent snacking (76 percent) and continual bottle/sippy cup use with beverages besides water (52 percent). Healthy dental habits (protective factors) were reported by the minority of participants where 36 percent received fluoride treatments in the past 6 months, 29 percent brushed twice-a-day, and 8 percent used fluoride supplements. Dental screenings found that patients had white spots/demalcification (64 percent), plaque accumulation (50.5 percent), restorations (41.6 percent), decay (25 percent), and gingivitis (3 percent), leaving only 28 percent of children who had healthy teeth. The majority of participants (80.5 percent) were provided with same-day dental referrals with 72 percent successfully completing the referral. The average dental assessment took only 4.73 minutes (3-8.83 range). Limitations of this study include data collection from one community and self-report data.

**Data Indicators:** Healthy Lifestyles, Supportive Environments


The authors report the effects of child development accounts (CDAs) on parent stress and parenting practices. This study used a population-based randomized experiment as part of the SEED for Oklahoma Kids statewide CDA initiative intervention (college savings plan) where the experimental group received a $1,000 CDA account. Baseline and follow-up telephone surveys and birth certificates were used for data collection. Baseline surveys assessed child health status, parental social support, parent characteristics, parental depression symptoms, household size and income. The follow-up survey included a parenting stress scale and parenting practices. Birth certificates determined child race, gender, and age and parental nativity (citizenship) status. Study approvals were not mentioned in this publication. Participants included 2,230 parents of children born in Oklahoma in 2007. Overall, parents in the experimental group screamed at their child significantly less than control-group parents. However, parental stress levels were not impacted. American Indian parents in the experimental group played with and praised their children more frequently (alpha < .10). Self-report data, control and experimental groups differed by missing household income information, African American household income was significantly higher in the treatment group, and American Indians reported significantly lower levels of social support in the treatment group. American Indian parents made up only approximately 11 percent of the sample.

**Data Indicators:** Successful Students, Supportive Environments, Vibrant Communities

The authors report on the successes and challenges of indoor environmental health assessments among American Indian (AI) communities. A collaboration between the Center for American Indian Community Health at the University of Kansas Medical Center, Children’s Mercy Hospital’s Center for Environmental Health and Allergy and Immunology Research Lab and trained AI environmental health specialists to complete indoor health assessments. A baseline questionnaire was administered to collect residents’ health symptoms, and home and demographic information. Photos of environmental concerns within homes were collected as well among level 1 assessments. Level 2 assessments collected samples for air quality, allergens and dust, moisture, chemical exposure, and safety and injury prevention. Study approvals were not mentioned in this publication. Participants included 26 level 1 homes, 26 level 2 homes of individual AI home owners or renters, and 20 places of employment with at least 30 percent AI employees in Kansas or Missouri. Issues of allergens and dust were identified in 98 percent of locations and largely attributed to visible dust and clutter. Working smoke and/or carbon monoxide detectors were absent from 89 percent of locations, chemical exposures present in 82 percent of locations were largely due to air fresheners/candles, and structure issues were found in 78 percent of locations which included chipping paint, missing/damaged downspouts, and missing/damaged splash blocks. Air flow issues were found in 71 percent of locations, mechanical issues discovered in 65 percent of locations were largely related to furnace air filters, and appliance issues were noted in 60 percent of assessments largely attributed to stoves lacking external exhaust systems. The most common health issues identified were asthma and allergies. Participants often cleaned homes before assessments limiting accuracy of some assessments.

**Data Indicators:** Vibrant Communities


Through this manuscript, the authors report on an evaluation of a 10-day outdoor adventure leadership experience (OALE) engaged in culturally embedded activities that “were historically carried out by their ancestors.” The purpose of the OALE was to help Indigenous youth develop resilience and well-being. The authors report two methods: CBPR; and ethnography. The collaboration between Wiknemikong community leaders and academics from Laurentian University used the principles of CBPR to guide the
study. Sources of data include interviews with youth and staff leaders, individual journals from youth, staff leaders and researchers, elder teaching and discussions, and, post-program focus groups. Approval for this study was granted from Laurentian University and the Manitoulin Aboriginal Research Review Committee. During 2009, three OALE sessions took place with a total of 43-youth that averaged 14.7 years of age (11.9-18.7 age range), approximately 40 percent were female. Analysis resulted in three themes of (a) connecting with creation, (b) connecting with self, and (c) viewing through an indigenous lens that lead to youth connecting with the good life (Anishinaabe Bimaadziwin). Anishinaabe Bimaadziwin or “the goal of healing, learning, and life in general.” The first theme, connecting with creation, was described as an external sensory experience or a process interacting with the natural world, ceremony and prayer, and others to gain knowledge. The second theme, connecting with self, was described as realizing inner strength, abilities, knowledge, and intention through reflection. The third theme, viewing through an indigenous lens, was described as youth activating “indigenous intelligence” guided by stories shared by accompanying elders. In this study, resilience and well-being were tied to the key mechanisms of Anishinaabe Bimaadziwin, connecting with creation and self, and viewing through an indigenous lens. Limitations include that the project was in one community and Anishinaabe Bimaadziwin will be defined differently.

Data Indicators: Healthy Lifestyles, Supportive Environments


Authors report on the effects of the Outdoor Adventure Leadership Experience (OALE) program on Aboriginal adolescent resilience and well-being. A collaboration between Wikwemikong community leaders and researchers from Laurentian University in Sudbury was implemented to develop OALE using a mixed methods research design guided by the Medicine Wheel and Outward Bound Process model frameworks. A 78-item Health and Well-Being Questionnaires (HWBQ) assessed mental, physical, emotional, and spiritual health. HWBQ was comprised of a 14-item resilience scale (mental), Physical Component Score (physical), Mental Component Score (mental), Self Esteem Scale, Flourishing Scale (mental/emotional), Scale of Positive and Negative Emotion (emotional), Satisfaction with Life Scale (mental/emotional), Social Support (emotional/mental) and Spiritual Values (spiritual), and Community Values (spiritual/mental) and was administered to adolescents at pretest, 1-month posttest, and 12-month follow-up. Study protocol was approved by the Manitoulin Anishinabek Research Review Committee, Wikwemikong Health Services Committee, Chief, and Council, and the Laurentian University Research Ethics Board. Participants included 73 adolescents ages 11.9-18.7 (M=14.6) and majority male (64.4 percent) from the Wikwemikong Unceded Indian Reserve in north-eastern Ontario. Data from fifty-nine
participants who completed the HWBQ pretest, 47 who completed the posttest, and 33 who completed the 12-month follow-up were analyzed. Improvements in short-term resilience were seen by increases from pretest to posttest but decreases were found to approximate pretest scores at follow-up. All other scales (secondary outcomes) increased from pretest to posttest with the mean mental health, balance of emotion, and satisfaction with life increasing continuously from pretest to follow-up. Contextual factors such as fatalities, life stressors, poor peer influences, community and school programs, and changes in living environment may have impacted scores from posttest to follow-up. Participants qualitatively reported that OALE improved personal growth through independence, interacting with others, learning skills, persevering, and contributing to school success. Limitations include low survey response, one community, small sample size.

**Data Indicators:** Healthy Lifestyles, Supportive Environments


The authors report on the impact of a healthy relationships curriculum, Discovery Dating. The curriculum was created to increase resilience, self-efficacy, and personal agency to improve health outcomes and reduce risk behaviors. The Discovery Dating’s 8 core approaches were implemented and evaluated for improving student resilience, self-efficacy, and personal agency. The curriculum was guided by theories of change. Pre- and post-surveys were completed by the intervention and control group and contained the Resilience Scale (resilience), GSE (self-efficacy), and Behavior Identification Form (personal agency). According to the authors, personal agency is a combination of self-efficacy and self-regulation. The University of Wisconsin-Oshkosh IRB approved the study protocol. Participants included 164 students from a western United States tribal middle school (81 seventh graders in the intervention, 84 eight graders in the control). Fifty-four seventh grade cases and 46 eight grade cases were retained for analysis. The intervention has a significant result on personal agency from pre- to post-test. While long term outcomes were not assessed, the authors theorize that those who are more likely to understand the consequences of their actions may be less likely to engage in risky behaviors. Although previously validated scales were used, none were assessed among AI/AN youth and high attrition rates.

**Data Indicators:** Healthy Lifestyles

The authors report on whether a culturally appropriate, online HIV/STI/pregnancy prevention program, Native It’s Your Game, is effective among American Indian/Alaska Native middle-school youth. This program efficacy testing was a collaborative effort between the Alaska Native Tribal Health Consortium, Inter Tribal Council of Arizona, Northwest Portland Area Indian Health Board, and University of Texas Health Science Center at Houston (UTHealth) School of Public Health. Online surveys were administered at baseline and 3 months and assessed behaviors (avoidance of risky situations, alcohol use, drug use, dating violence victimization and perpetration, and sexual experience) and psychosocial factors (knowledge of STIs/condoms, self-efficacy for refusing sex/negotiating condom use, attitudes/beliefs about sex, condoms and pregnancy, reasons to not have sex, beliefs about friends’ attitudes toward abstinence and perceived norms, parental communication about sex, and intentions to remain abstinence/use a condom at next sexual encounter/engage in oral or vaginal sex. Approval for this study was obtained by the Alaska Area Institutional Review Board (IRB), Portland Area IRB, UTHealth IRB, and 16 tribal councils, health boards, villages, and/or community agencies. Participants include twenty-four program sites participated with 402 youth ages 12-14 years with a mean age of 13.01 years. The majority of participants were female (55.5 percent) and American Indian/Alaska Native (86.1 percent). At baseline, most youth reported not being sexually active (95 percent), were rarely or never in risky situations that could lead to sex (70 percent), never using alcohol (73.8 percent) or drugs (70.3 percent). Less than half of youth were dating within the past year, but of those who were, 20 percent identified they were a victim of dating violence and 13 percent identified as perpetrators. At follow-up, youth in the intervention group had significantly greater knowledge about condoms and HIV/STIs, self-efficacy to access and use condoms, and reasons to not have sex. Behaviors were not assessed at follow-up due to short-term follow-up, surveys were self-report, program non-completers were significantly more sexually experienced and older, and concurrent exposure to other sexual health programs was reported by 48 percent of students across both treatment groups.

**Data Indicators:** Healthy Lifestyles
The authors report the effectiveness of using financial incentives to promote exercise (frequency and duration) among “habitually sedentary” overweight and obese American Indian (AI) adolescents. This study used a prospective, randomized trial design. Participants were expected to exercise indoors three times a week for 48 weeks. These weeks were broken into three phases to test difference incentives (modest, enhanced, reduction). Baseline assessments included height, body mass, waist circumference, BMI, total body, regional fat, and lean tissue, aerobic fitness, physical activity, HBA1c, and a questionnaire assessing environmental barriers. During study participation, participants wore a chest strap heart rate monitor to assess physical activity intensity and duration. The Choctaw Nation of Oklahoma and University of Oklahoma Health Sciences Center Institutional Review Boards (IRBs) approved the study protocol. Participants include seventy-seven overweight/obese American Indian youth, ages 11-20.9, from the Choctaw Nation Health Service area of Southeast Oklahoma who completed Phase 1 of the trial. Phase 2 had 46 participants (23 girls and 23 boys). Phase 3 had 13 participants. During Phase 1, there were no differences in exercise duration and intensity between the incentivized and standard payment groups, and mean HbA1c significantly increased among the control group. Phase 2 found that total moderate to vigorous physical activity (MVPA) time was 8.3 minutes longer in the enhanced incentive group compared to the standard payment group, although not significant. The incentive group had MVPA sessions that lasted 14 percent longer than in Phase 1, while the standard group had 14 percent shorter MVPA sessions. Phase 3 participants (raffle versus payment ramp down) completed 20 less exercise sessions than in Phase 2 but MVPA time was equivalent. Overall, boys completed more exercises than girls but not more total time per session. Barriers to exercise were cited as time demands (work, school, other obligations), lack of transportation, illness, and relocation (those who withdrew, specifically). Exercise frequency was inversely associated with maturation. Limitations include data being self-reported, many participants withdrawn voluntarily or involuntarily, the authors did not include a no-payment group. Other gifts may work better than money.

Data Indicators: Healthy Lifestyles


The purpose of this article was to understand and identify protective and risk factors surrounding aggressive delinquency among Indigenous adolescent populations and determine lifelong trajectories after exposure to protective and risk factors. The authors reported using a semi-parametric finite mixture model to examine aggressive
delinquency trajectories. Sources of data included interviews with adolescents and families and questionnaires. All interviewers completed human subjects protection training which protect confidentiality. The project was approved by participating reservations and the IRB. Participants included families of 646 tribally enrolled children 10-19 years old who lived on or within 50 miles from a reservation or reserve. Analysis resulted in the identification of five aggression trajectory groups: non-offenders (22.1 percent); moderate desistors (19.9 percent); adolescent-limited (16.7 percent); high desistors (22.2 percent); and chronic (19.2 percent). Gender played a role in group membership as girls were more likely than boys to be in non-offender and adolescent-limited groups. Experimenting with a substance increased the relative risk of being in the high desistor group. Early dating was identified as a greater risk factor for being in the high desistor and chronic groups than the non-offender group. Delinquent peer association is something which when increased, the relative risk of being in the moderate desistor group and adolescent-limited groups. Per capita family income decreased the relative risk of belonging to the chronic group than the non-offender group. Results are of one Indigenous culture, thus limited to that culture alone.

Data Indicators: Healthy Lifestyles, Supportive Environments


The purpose of this paper was to address gaps in current literature on positive psychology in AI/AN adolescents and identity possible mechanisms such as self-esteem, future optimism that mediate the relationship of ethnic identity with anxiety symptoms, depressive symptoms, and externalizing behavior. The authors hypothesize that ethnic identity is indirectly associated with adolescent mental health through promotion of optimism for the future and self-esteem. Future optimism and self-esteem then have a direct relationship with mental and behavioral health. The sample data came from the North Carolina (NC) Academic Center for Excellence Rural Adaptation Project (RAP), a 5-year longitudinal panel study of more than 5,000 middle school students from 28 public schools in two rural, economically disadvantaged counties in NC. Questionnaire was completed in school setting. Self-esteem was measured using a five-item scale adapted from the Rosenberg Self-Esteem scale; optimism 12-item SSP was assessed using the future optimism scale (Bowen & Richman, 2008), and externalizing behavior, which was measured by the modified 12-item aggression subscale from the YSR (Achenbach & Rescorla, 2001). Parents could opt-out to remove their child from the study roster. No others were noted. The racial/ethnic composition of the final sample mirrored the diversity of the surrounding community: approximately one-third of participants identified as Caucasian, 29 percent identified as American Indian (Lumbee), 28 percent as African American, and 9.46 percent identified as Latino. The sample was evenly divided by gender and mean age was 13.39 years. Using structural equation modeling, the authors found a positive association between
ethnic identity and self-esteem as well as between ethnic identity and optimism. Self-esteem was related inversely to depressive symptoms, anxiety symptoms, and externalizing behavior for all adolescents regardless of ethic/racial background. Finally, the strongest relationship was between self-esteem and future optimism. Limitations are that the data are specific to Lumbee community members.

**Data Indicators:** Healthy Lifestyles


The authors examine the overall effects of cultural connectedness on mental health among First Nations youth. The authors used a cross-sectional study design and a subscale of the Cultural Connected Scale-Short Version (CCS-S) which included identity, traditions, and spirituality to determine its alignment with mental health (self-efficacy, sense of self, school connectedness, and overall life satisfaction). Sources of data include results from a cross-sectional, self-report, 10-item CCS-S survey. Approval for this study was granted from the Centre for Addiction and Mental Health (CAMH), Centre for Prevention Science (CPS) Research Ethics Board, the school board research ethics team, and the educational authority in Saskatchewan. Additionally, appropriate traditional and moral authorization was sought and approved. Participants included 290 (140 male, 140 female, and 10 unspecified) First Nation, Inuit, or Metis youth from grades 7-12 and ages 11-24, where 90 percent of the participants were 18 years old or younger. Analysis resulted in a positive correlation in the CCS-S subscale and mental health (self-efficacy, sense of self, life satisfaction, and school connectedness). The spirituality sub-scale significantly improved model fit with sense of self, while traditions and spirituality subscales did not improve model fit beyond the identity subscale for life satisfaction. Data were cross-sectional which does not account for the direction of effects. Community-based indicators of success were not explored which raises a question of subjectivity in reports. Data were self-report and subject to bias. This is just one community and not necessarily generalizable.

**Data Indicators:** Healthy Lifestyles, Successful Students


The authors aim to identify and examine the effects of risk and protective factors against heavy binge drinking behaviors among American Indians adolescents living on a reservation. Collaboration between the White Mountain Apache Tribe and Johns Hopkins Center for American Indian Health (JHU) and the use of a cross-sectional, case-control study design were reported by the authors. Sources of data include the use
of Audio Computer Assisted Self-Interview (ACASI) to complete self-report quantitative assessments. Approval for this study was granted by the JHU and Indian services as well as Apache Tribal Council and Health Advisory Board. Data were collected from 136 youth between September 2011 and July 2012. Sixty-eight were cases and 68 were controls. Inclusion criteria included American Indian ethnicity, 10-19 years old and Fort Apache Indian Reservation residence. Cases were 12-19 years old and controls were 10-19 years old, roughly 50 percent were male. Risk and protective factors were broken up into several different levels: individual; peer; family; and cultural/community. Protective individual factors included attending school and having social problem-solving skills. A notable risk factor at the individual level is aggression. At the peer level, almost all considerations were risk-related; association with a devious peer group, poor social relations and having an argument with a friend in the past 6 months were all identified as risk factors. At the family level, residential stability and family closeness were the strongest protective factors. Adolescents of poorly functioning families were at a greater risk of heavy binge drinking. Multigenerational households were also reported as a risk factor. At the cultural level, the strongest protective factor was having traditional American Indian values and having a strong ethnic identity. Limitations include a small sample size, cases and controls were not matched for age or gender, cross-sectional study design, self-report measures, and this is only the results of one tribe.

**Data Indicators:** Healthy Lifestyles, Successful Students, Supportive Environments, Vibrant Communities


The authors examine American Indian food insecurity prevalence and determine the relationship(s) between food insecurity and diet in American Indian households. Baseline data was collected using a cross-sectional study from February 2013 through April 2015. Data were collected through the use of audio recorded focus groups that were late transcribed. Approval for this study was granted by the University of Wisconsin Institutional Review Board and tribal institutional review boards. Written consent was also provided by caretakers for themselves and participating children. Inclusion criteria for this study included American Indian children, 2-5 years old, and their primary caregiver. A total of 450 adult-child dyads were included, 240 from rural households and 210 from urban households. The average age of the adults was 31.5 and 95 percent were female. The average age of children was 45 months, 50 percent were female. Food insecurity prevalence was 61 percent and significantly higher in urban areas (80 percent) compared to rural areas (45 percent). Notable differences were observed in food insecure and food secure households such as education, income, age of the adult and the distance traveled to buy food. There was a lower vegetable consumption among food insecure households, and higher consumption of
fried potatoes and sugar-sweetened beverages. Limitations include survey measures were self-report.

**Data Indicators:** Healthy Lifestyles, Vibrant Communities


The authors report on an evaluation of a 2-year randomized trial which assessed the efficacy of an obesity prevention toolkit administered to American Indian families with young children. The authors report using CBPR. Community input aided in developing the toolkit and study name. The toolkit was implemented by either an in-home mentor or instructions being mailed to the household. Data sources include at-home consultations and measurements of BMI gathered by either mentors or self-reports. This study protocol was approved by the University of Wisconsin IRB and participating tribal councils and followed guidelines set by the Declaration of Helsinki. Participants included 150 families with children between the ages of 2-5. Seventy-five families were randomly assigned to a mentor group and 75 families were assigned to a mailed only group. More than 90 percent of participants were American Indian, and all of the participants lived on or near a tribal reservation. An overall decrease in adult weight and mean child BMI was observed that throughout the administration of this toolkit. Children’s uptake of fruits and vegetable was significantly increased and screen time behavior was decreased in both adults and children. The study had a relatively small sample size and did not measure other factors that may be related to healthier lifestyles.

**Data Indicators:** Healthy Lifestyles, Supportive Environments


This manuscript is a review of a search for peer-reviewed articles which aims to identify healthy weight interventions for Aboriginal children. This search was done using MeSH keywords and conducted in PubMed, Psych INFO, ERIC and Web of Science. A Population, Intervention, Comparison and Outcome (PICO) framework was used to organize keywords. Peer-reviewed articles published in from January 1, 2000 onwards were included in the search for literature. Included articles were ones that addressed child, youth or family and healthy weight. Seventeen (17) articles were included for final review, 12 presented outcome evaluations of seven interventions and 5 presented process evaluations of the same interventions. Study approvals were not mentioned in this publication. Articles pertaining to Aboriginal or First Nations children who are obese or overweight or at risk of being obese or overweight were included in the literature review. None of the evaluations resulted in significant obesity or overweight reduction,
although some articles did report improved children’s dietary knowledge and behavior. Share AP reported less consumption of fats and oils and sugary beverages and more intake of water. The SLHDP resulted in fewer fats consumed among boys and higher fiber consumption among both sexes. This program also saw increased knowledge and dietary self-efficacy. In addition to implementing a policy change of reducing fats and sugar in school meals. Similarly, KSDPP resulted in fats and sugar. This program also strengthened as existing school policy. Pathways project also saw reduced consumption of fats, carbohydrate, and overall calorie intake. This program also reported changes in food choice, physical activity intentions, and curriculum knowledge. Action schools BC saw numbers of participants in the low aerobic category decrease. Most interventions included cultural elements. Several programs included families in the intervention. A limitation was the focus was on peer-reviewed literature, and was not first-hand knowledge or data. Achieving a healthy weight in a long-term outcome.

**Data Indicators:** Healthy Lifestyles, Supportive Environments, Vibrant Communities


This manuscript reports on the impact of gardening education program, Earth Box Kids, which was implemented for Aboriginal First Nation children. The purpose was to compare these children’s food preferences as well as their food consumption at baseline to their food preferences and food consumption at a 7-month follow up. The study had two objectives: 1) to assess changes in participants self-reported vegetables and fruit preferences; and 2) to evaluate the intervention impact on participants self-reported consumption of vegetables and fruit at home. The curriculum was guided by Social Cognitive Theory. The authors report CBPR as a method. Children helped to grow indoor gardens. Sources of data include questionnaires administered to children before the gardening program as well as questionnaires after seven months of the gardening program; vegetable preference survey for children. Data were collected at baseline and 7-month follow-up. Approval for this study was granted by a University of Alberta ethics review board as well as a research steering committee. This study included 116 children, 76 from which the data was based. The children were from grades 1-6 with a mean age of 9 years old, and 53 percent were male. It was reported that this intervention improved First Nations’ overall preferences for fruits and vegetables, but did not increase their home-consumption of fruits and vegetables. While home consumption was not influenced, increased vegetable and fruit preference may lead to increased intake especially if the garden produce enough to be part of school menu as well as influence food choices made later in life. Limitations include that questionnaires were self-report so there is no guarantee children answered accurately and/or truthfully. Families were not included in the program.

**Data Indicators:** Healthy Lifestyles

The purpose of this manuscript is to determine the efficacy of Lakota Circles of Hope (LCH), an elementary school culturally-based prevention program, in impacting fourth and fifth graders' decision making regarding risky behaviors. The author reported two methods: collaboration; and empowerment. Sources of data include pre- and post-intervention questionnaires. The author implemented guidelines consistent with the Committee on Publication Ethics. Participants include 1,531 students of which 1,145 students completed the post questionnaire. Of those belonging to the intervention group, 740 fourth graders and 652 graders completed the pre-questionnaire. Five-hundred fifty-nine (559) fourth graders and 452 fifth graders responded to the post questionnaire. Participants had a mean age of 10.2 years and 52.6 percent were female. In the comparison group, 139 children completed the pre-questionnaire and 134 responded to the post questionnaire. The average age was 10.2 years old, and 44.9 percent were female. The impact of the LCH program was measured by evaluating the students' perspectives on risk behaviors, communication, respect, Lakota identity, conflict resolution, and self-esteem. The LCH program had no effect on the childrens' risky behaviors. There was a significant difference regarding communication between pre- and post-data collection. Regarding respect, there was no significant difference between comparison and intervention groups. There was a significant difference between comparison and intervention groups regarding Lakota identity, but not pre- and post-data collection period. Conflict resolution showed no significant difference based on group assignment or pre- and post-data collection. Regarding self-esteem, there was a significant difference based on group assignment, but not pre- and post-data collection. The Intervention and comparison schools were self-selected.

**Data Indicators:** Healthy Lifestyles


This manuscript serves to report the development of an educational services program for Native students based on identified barriers to success. This article reports on the development in one specific school in Alaska high school. The name of the program is the CITC Partners for Success program. The authors report participatory observation, ethnography, historical reference, as well as surveys and questionnaires as methods. Collaboration between community members regarding difficulties that Native students faced were observed. Surveys and questionnaires were used as sources of data, as well as interviews with educators, school administrators and Native students either still
enrolled in high school or who have dropped out. The Cook Inlet Tribal Council worked with the authors and granted approval for this review. Participants include Alaska Native students enrolled at Bartlett High School. Regarding barriers for school success, the authors report insufficient support in the form students feeling unwelcomed in mainstream schools, and lacked adequate one-on-one counseling and academic placements. Unwelcome feeling, or sense of belonging, coupled with lack of cultural connection with academic materials left student unmotivated. Teachers demonstrated a lack of knowledge about Alaska Native’s learning styles, traditions, relationship and often resorted to stereotypes. This was also true of fellow non-Native students. Native students from small rural communities had a difficult time being in larger education buildings. The CITC Partners for Success program selectively hired teachers and staff, provided training to new staff, developed a collaborative curriculum committee to problem solve. Cultural components were added to the curriculum, a 1:20 teacher to student ratio was ensured. School staff were prepared to refer for family wrap around services to benefit students. Analysis resulted in the program’s clear success. In a given year the program was implemented. Native students who were enrolled in CITC classes had a 79 percent graduation rate compared to a 43.6 percent graduation rate for students not enrolled in CITC classes. Furthermore, from 2011-2014, 100 percent of CITC enrolled seniors at Bartlett High School graduated and the school’s overall dropout rate dropped from 9.7 to 4.1 percent. From 2010-2014, more than 80 percent of graduates who had been enrolled in Bartlett CITC courses went on to be accepted to university, college or technical programs and had financial aid resources organized. Limitations are limited to this is just one community in Alaska, and some of the data were self-reported.

Data Indicators: Successful Students


The authors report perspectives of professionals, care providers, and stakeholders regarding the factors that influence and ways of promoting health and wellness among urban Aboriginal youth. This was a qualitative study using Glaserian grounded theory approach. Data included semistructured interviews focused on factors influencing health and wellbeing of urban Aboriginal youth and suggestions for improving their health, field notes, and memos. Study protocol was approved by the University of Alberta Institutional Review Board. Informed written consent was obtained from participants. Participants included 53 key informants (professionals, care providers, and stakeholders) from the Edmonton, Alberta area that directly or indirectly interact with urban Aboriginal youth. Three themes of health promotion were identified; (1) established resources; (2) benefits of urban contexts; and (3) the potential of urban Aboriginal youth. Established resources included governmental support such as bylaws and financial aid, community or institutional support such as youth-specific organizations and housing and culturally sensitive programs and services, educational
opportunities such as cooking classes, school physical education, organized sports within the school and community, and education transition programs offered through colleges and universities. Benefits of urban contexts encompassed being able to access health care, emergency support systems, healthy foods, and greater employment and educational opportunities. Potential of urban Aboriginal youth included the value of cultural tradition, experience, skills, and knowledge. Factors negatively impacting youth were identified under the sociohistorical (transgenerational trauma, disconnection from Aboriginal culture, colonial policies), sociocultural (disconnection from Aboriginal culture, sense of lost culture), sociopolitical (stigmatization, racial discrimination and marginalization), socioeconomic (poverty, economic inequality, limited financial literacy), personal and familial (negative circumstances, unhealthy lifestyles, negative past experiences, limited life skills, limited health-related education and knowledge, absence of sense of belonging and family relationships), natural-environmental (cold climate, challenge acquiring food in nature), and socioenvironmental (discouraging built-in environment, inappropriate living environment, inaccessible resources). Participants reported health and wellness could be promoted through interventions that were youth based and youth driven (understanding the personal life context, including opinions and perspectives of youth), community based and community driven (input and perspective of the community, sharing knowledge between communities/organizations), culturally relevant and appropriate (avoiding stigma and stereotyping, acknowledging diverse cultures, increasing availability of these programs, and providing relatable information), enabling and empowering (developing positive self-identity, being resourceful, resilient, and self-motivated, including critical think abilities, providing experiential and practical opportunities), and continuous and sustainable (better promotion of existing resources, establishing long-term relationships with youth, connecting youth with influential role models, build programs around existing resources, knowledge, and expertise).

Limitations include the perspectives of youth are not included

**Data Indicators:** Healthy Lifestyles, Successful Students, Supportive Environments, Vibrant Communities